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EXAMINER

HOM, SHICK C

ART UNIT PAPER NUMBER

2666

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,379

Applicant(s)

NUMMINEN, JUSSI

Examiner

Shick C. Hom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9, 10, 12, 15, 16 and 21-26 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 11, 13-14, 17-20, 27-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/28/05 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In page 2 line 17 to page 3 line 11 applicant argued that Dent discloses discontinuous transmission and reception but does not recite powering down the receiver circuitry and while Abbadessa discloses powering down the circuitry it does so during an idle mode but not during a packet service mode when receiving one or more packets is not persuasive because the rejection is base on the combination of Dent in view of Abbadessa and the motivation to combine these reference being that Abbadessa recite the desirable added feature of powering down the circuitry in order to minimize power required by the mobile station 106 and provide more efficiency for the system because saving power increases the

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battery life, increases call times and standby times which is important to a mobile.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, 7, 9-10, 12, 15-16, 21-22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (5,239,557) in view of Abbadessa (6,236,856).

Regarding claims 1-4, 10, 15-16, 22, 26:

Dent discloses the method for operating user equipment in a telecommunication network for receiving packets during a packet service mode, comprising the steps of receiving one or more packets during a packet service mode; and entering the user equipment into a discontinuous reception mode by receiving either: a) two or more slots of each radio frame, or b) one or more frames (see abstract which recite the telephone system

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using discontinuous transmission and reception to conserve receiver resources and col. 3 lines 33-51 which recite the one or more code-words transmitted at the beginning of the frame to indicate whether the remainder of the frame will be transmitted or not and wherein demodulating of the signal are not carried out for the remainder of the frame); and so as to establish a discontinuous radio link for the user equipment in the telecommunication network in a physical radio transmission layer when receiving the one or more packets while maintaining the logical connection in higher protocol layers during the packet service mode (see col. 3 lines 3-32 and col. 8 lines 11-16 which recite maintaining receiver synchronization during the discontinuous reception clearly reads on maintaining connection in higher protocol layers during the packet service mode) as in claims 1, 3-4, 22, 26; and characterized in that in a discontinuous period the user equipment waits a variable discontinuous period of time (see col. 3 lines 3-15 which recite the transmitter being variable duty contingent upon speech activity level) as in claim 16.

Regarding claim 5:

Dent disclose the method characterized in that the user equipment has an active period of two or more consecutive slots or idle frame(s) prior to its own reception for performing

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neighbor measurements and power control functions (see col. 10 lines 8-20 which recite signals received by the base station receiver being used to for measurement of signal strength which in turn is used to adjust the power level prior to being presented to the summer reads on the active period of slots prior to performing measurement and power control).

Regarding claim 7:

Dent disclose the method characterized in that the user equipment responds to a change in the status of a transport format combination indicator (TFCI) field in the two or more slots of the radio frame for determining an end of a data packet (in Fig. 3B see the BB flags at the end of the frame and col. 5 lines 45-54 which recite the DTX flags indicating the speech frames classed as silent begin with BB reads on responding to the TFCI for determining an end of the packet).

Regarding claims 9 and 12:

Dent disclose the method characterized in that the user equipment determines a start of a new packet transmission by monitoring the status of the transport format combination indicator (TFCI) field in a previous radio frame before a new packet data radio frame as in claim 9 and defining a period where the user equipment needs to perform a decoding of the radio frame or slots in order to detect if packet transmission

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is active (in Fig. 3B see the AA flags at the start of the frame; col. 5 lines 45-54 which recite the AA flag indicating the beginning of non-silent frames reads on determining the start of a new packet transmission by monitoring the TFCI before a new packet data radio frame; and the abstract which recite the step of decoding when active speech is present).

Regarding claim 21:

Dent discloses the method characterized in that the user equipment concurrently enters into a discontinuous transmit mode and performs one or more closed loop power control sequences for following the fading of an uplink, a downlink or both when its transmitter is active (see col. 11 line 61 to col. 12 line 15 which recite check for determining discontinued transmission due to fading).

For claims 1-4, 10, 16, 22, 26, Dent discloses all the subject matter of the claimed invention with the exception of the step of powering down receiver circuitry of the user equipment for either a) the remaining slots of the radio frame or b) one or more predefined periods, signaled by the telecommunication network as recited in claims 1, 10, 22, 26; characterized in that packet transmission starts in one out of every K radio frames as in claim 2; and characterized in that in

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a discontinuous period the user equipment waits a fixed discontinuous period of time as in claim 15.

Abbadessa from the same or similar fields of endeavor teach that it is known to provide the step of powering down receiver circuitry of the user equipment for either a) the remaining slots of the radio frame or b) one or more predefined periods, signaled by the telecommunication network (in Fig. 1 see the GSM network whereby the base station provide radio communication with mobile station and col. 7 lines 42-45 which recite the step of implementing discontinuous reception at the mobile station whereby circuitry is power down during this idle mode) as recited in claims 1, 10, 22, 26; characterized in that packet transmission starts in one out of every K radio frames (see col. 4 lines 15-21 which recite the use of burst transmission clearly reads on packet transmission starting in one out of every K radio frames) as recite in claim 2; and characterized in that in a discontinuous period the user equipment waits a fixed discontinuous period of time (see col. 7 lines 46-58 which recite the step of monitoring to a specific time interval clearly reads on waiting the fixed discontinues period of time) as in claim 15.

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to

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power down receiver circuitry of the user equipment for either a) the remaining slots of the radio frame or b) one or more predefined periods, signaled by the telecommunication network and characterized in that in the discontinuous period the user equipment waits a fixed discontinuous period of time as taught by Abbadessa in the communications method of Dent. The step of powering down receiver circuitry of the user equipment for either a) the remaining slots of the radio frame or b) one or more predefined periods, signaled by the telecommunication network and characterized in that packet transmission starts in one out of every K radio frames and characterized in that in a discontinuous period the user equipment waits a fixed discontinuous period of time can be implemented by providing the power control logic and circuitry and burst transmission of Abbadessa in the receiver of Dent. The motivation for providing the step powering down receiver circuitry of the user equipment and burst transmission as taught by Abbadessa in the communication method of Dent being that it provides more efficiency for the system since the system can save power at the receiving end.

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4. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (5,239,557) and Abbadessa (6,236,856) in view of Vembu (6,259,928).

Regarding claims 23-25:

For claims 23-25, Dent and Abbadessa disclose the user equipment for operating in a telecommunication network described in paragraph 3 of this office action. Dent and Abbadessa disclose all the subject matter of the claimed invention with the exception of the equipment characterized in that the power control loop module checks for packet transmission in one out of every K radio frames as in claim 23; characterized in that the power control loop module checks two or more consecutive slots in the radio frame as in claim 24; and characterized in that the power control loop module checks two or more non-consecutive slots in the radio frame as in claim 25.

Vembu from the same or similar fields of endeavor teach that it is known to provide the equipment characterized in that the power control loop module checks for packet transmission in one out of every K radio frames; characterized in that the power control loop module checks two or more consecutive slots in the radio frame; and characterized in that the power control loop module checks two or more non-consecutive slots in the radio

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frame (see col. 7 lines 43-60 which recite determining the number of consecutive frames received with errors and the error rate being beyond an acceptable range and power control mode being the burst mode). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the equipment characterized in that the power control loop module checks for packet transmission in one out of every K radio frames; characterized in that the power control loop module checks two or more consecutive slots in the radio frame; and characterized in that the power control loop module checks two or more non-consecutive slots in the radio frame as taught by Vembu in the telecommunications network of Dent and Abbadessa. The equipment characterized in that the power control loop module checks for packet transmission in one out of every K radio frames; characterized in that the power control loop module checks two or more consecutive slots in the radio frame; and characterized in that the power control loop module checks two or more non-consecutive slots in the radio frame can be implemented by connecting the means for power control loop module checks at the network of Dent and Abbadessa. The motivation for using power control loop module checks as taught by Vembu in the telecommunication network of Dent and Abbadessa being that it

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provides more efficiency for the system since the system can optimize power control in the network.

Allowable Subject Matter

5. Claims 6, 8, 11, 13-14, 17-20, and 27-29 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER